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**Pricing services within Producer Price Indexes - The
New Zealand Experience**

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ABSTRACT

Since November 1980, Statistics New Zealand (SNZ) has produced Producer Price Indexes for a complete range of market industries. These industry Inputs and Outputs indexes have been produced for primary, manufacturing and service industries.

This approach differs from that of most national statistical offices, who have preferred to undertake extensive investigations of the conceptual and practical difficulties for pricing services before developing price indexes for such.

The inclusion of services industries within the PPI provides a valuable tool for deflation within the national accounts, and enables the production of industry Input indexes which reflect the price change in the totality of a firms factors of intermediate consumption, rather than simply that of goods and materials.

In many instances, SNZ uses charge-out rates of service providers to represent the price of the services being provided. While the use of charge-out rates is practically straightforward, there are a number of potential deficiencies with the use of such charge-out rates to represent service prices.

An initial investigation was made into the prices collected for a range of legal services, using both charge-out rates and "model prices". These prices were compared in an effort to assess the extent (if any) to which charge-out rates could be used to represent legal service prices.

Notwithstanding the limited scope of the investigation, a number of interesting points can be made:

- The definition of the service being provided is of paramount importance in constructing price indexes for service activities. This definition may well depend upon the uses to which the price index will be put, and this will in turn impact upon the choice of an appropriate pricing methodology.
- While there are clearly some short-term differences in the index series derived from using model prices as opposed to charge-out rates for legal services, over the medium to long-term these differences are not necessarily as large as might have been expected.
- Where the additional costs involved in developing and maintaining a model pricing methodology for service activities are significant, it may be that the use of charge-out rates can provide a cost-effective substitute while still returning a meaningful time series.

INTRODUCTION TO THE PPI:

The New Zealand Producer Price Indexes (PPI) are a series of quarterly economic indicators designed to measure price changes in the production sector of the domestic economy. The PPI has two types of indexes. First the 'output' indexes which measure changes in the prices received by producers and second the 'input' indexes which measure the price changes in the costs of production faced by producers (excluding labour and capital costs).

The PPI was developed primarily as a suite of indexes to assist in the production of the country's national accounts. Consequently, the indexes are based on national accounting concepts.

History

An outline of the major historical milestones for the PPI is presented in Table 1.

Table 1: History of the Producers Price Index

July 1975	The "Price Index Number Research and Development Section" was formed and commenced work on the index which would become the PPI.
July 1978	The PPI was first published under the name of the General Price Index, indexes being for the base quarter of December 1977 and the following March 1978 quarter. Some indexes for example, Construction outputs and Financing & Insurance etc. outputs were not completed at this time
November 1980	Output indexes were published for the Construction and Financing & Insurance etc. groups.
August 1981	The index name was changed from General Price Index to Producers Price Index.
1982-8	First PPI progressive redevelopment cycle, involving reweighting and rebasing of individual and All Group indexes.
1995-98	Second PPI progressive redevelopment cycle, involving reweighting and rebasing of individual and All Group indexes as well as changing the industrial classification from NZSIC to ANZSIC.
August 1998	The June quarter's PPI release is the first with the new published ANZSIC index structure. The PPI tables are rebased to the December 1997 quarter. Commodity Price indexes are introduced.

Output Indexes

The PPI outputs indexes are intended to measure changes in the prices received by businesses for the goods and services they produce. The definition of output is consistent with gross output as defined by the System of National Accounts (SNA). Gross output within the SNA is equivalent to sales of goods and services; plus net additions to stocks; plus work in progress; and own account capital work (e.g. buildings constructed by a business for its' own use).

The prices used to calculate the output indexes are those prevailing at the "factory door" (i.e. the price received by the producer). The output indexes cover:

- Primary products
- Manufactured goods
- Revenue from renting and leasing
- Provision of services
- Capital work undertaken by own employees
- Margins on goods purchased for resale

Excluded from the outputs indexes are:

- Interest and dividends
- Royalties and patent fees
- Receipts from insurance claims
- Government cash grants and subsidies
- GST and other indirect taxes

Input Indexes

The PPI inputs indexes are intended to measure price changes in the current costs of production within the economy. The definition of current costs of production is consistent with intermediate consumption as defined in the SNA. Intermediate consumption within the SNA is equivalent to the goods and services used up in the production process by a business in creating its' output. It is important to note that this concept excludes expenditure on both capital and labour.

The inputs indexes, which measure price changes in the costs of production cover:

- Materials
- Fuels and electricity
- Transport and communication
- Commission and contract services
- Rent and lease of land, buildings, vehicles and plant
- Business services
- Insurance premiums (less claims)

Excluded from the inputs indexes are:

- Wages and salaries
- Capital expenditure
- ACC levies and other government charges
- Rates
- Royalties, patent fees
- Bad debts and donations

Methodology

The PPI is calculated using the "weighted price relatives" form of the Laspeyres price index:

$$L_n = \frac{\sum_{i=1}^n \frac{P_{in}}{P_{i0}} w}{\sum_{i=1}^n w} * 1000$$

where L_n = Laspeyres price index value

P_{i0} , P_{in} = prices in periods 0 (base period) and n (current period) respectively

$w = P_{i0} q_{i0}$ (the expenditure in the base period)

q_{i0} = quantity in period 0 (base period)

i = ith good or service

The PPI is produced quarterly, no later than nine weeks after the end of the reference quarter.

Most PPI prices are obtained by quarterly postal survey, the Commodity Price Survey (CPS), with the pricing date being the 15th day of the middle month of the reference quarter. Individual price quotes are obtained from about 2,700 respondents. Approximately 13,000 items are collected via the CPS, covering about 750 broad commodity (goods and services) descriptions.

Each of SNZ's PPI indexes are rebased and reweighted periodically on a rolling cycle. The rebases and reweights are conducted to ensure that:

- a) the scope and coverage of the indexes continue to meet the needs of users;
- b) the structure of the indexes reflect the up-to-date activities of the sector concerned;
- c) the burden on respondents is minimised;
- d) the weights being used continue to be representative of the sector concerned.

Structure

From the June 1998 quarter the PPI tables were redesigned to publish indexes based on Australia New Zealand Standard Industrial Classification (ANZSIC) industry groupings at level of interest and significance to users. This replaced the New Zealand Standard Industrial Classification (NZSIC) based production groups that were previously used. The current industries are consistent with the groupings to be used in the national accounts 1996 full inter-industry study that will be published in late 1999.

An outline of the industry indexes published for the PPI is presented in Table 2.

Table 2: Industry Indexes Published within the PPI		Series Identifiers	
Industry	Description	Outputs	Inputs
A	Agriculture, Forestry & Fishing	PPIQ.SNA	PPIQ.SUA
A01	Horticulture & Fruit Growing ¹	PPIQ.SNA01	PPIQ.SUA01
A02	Sheep & Beef Farming	PPIQ.SNA02	PPIQ.SUA02
A03	Dairy Cattle Farming	PPIQ.SNA03	PPIQ.SUA03
A04	Cropping & Other farming ¹	PPIQ.SNA04	PPIQ.SUA04
A05	Services to Ag., Hunting & Trapping	PPIQ.SNA05	PPIQ.SUA05
A06	Forestry & Logging	PPIQ.SNA06	PPIQ.SUA06
A07	Fishing	PPIQ.SNA07	PPIQ.SUA07
B	Mining	PPIQ.SNB	PPIQ.SUB
C	Manufacturing	PPIQ.SNC	PPIQ.SUC
C01	Meat and Meat Product Mfg	PPIQ.SNC01	PPIQ.SUC01
C02	Dairy Product Mfg	PPIQ.SNC02	PPIQ.SUC02
C03	Other Food Mfg	PPIQ.SNC03	PPIQ.SUC03
C04, C05	Tobacco, Beverage and Malt Mfg ²	PPIQ.SNC04	PPIQ.SUC04
C06	Textile and Apparel Mfg	PPIQ.SNC06	PPIQ.SUC06
C07	Wood Product Mfg	PPIQ.SNC07	PPIQ.SUC07
C08	Paper & Paper Product Mfg	PPIQ.SNC08	PPIQ.SUC08
C09	Printing, Publishing & Recorded Media	PPIQ.SNC09	PPIQ.SUC09
C10	Petroleum, Coal & Basic Chemical Mfg	PPIQ.SNC10	PPIQ.SUC10
C11	Rubber Plastics & Other Chemical Mfg	PPIQ.SNC11	PPIQ.SUC11
C12	Non-Metallic Mineral Product Mfg	PPIQ.SNC12	PPIQ.SUC12
C13	Basic Metal Mfg	PPIQ.SNC13	PPIQ.SUC13
C14	Sheet and Fabricated Metal Product Mfg	PPIQ.SNC14	PPIQ.SUC14
C15	Transport Equipment Mfg	PPIQ.SNC15	PPIQ.SUC15
C16	Machinery & Equipment Mfg	PPIQ.SNC16	PPIQ.SUC16
C17	Other Mfg	PPIQ.SNC17	PPIQ.SUC17
D	Electricity, Gas and Water ³	PPIQ.SND	PPIQ.SUD
D01	Electricity Generation and Supply	PPIQ.SND01	PPIQ.SUD01
D02	Gas Supply	PPIQ.SND02	PPIQ.SUD02
E01	Construction	PPIQ.SNE01	PPIQ.SUE01
F01	Wholesale Trade	PPIQ.SNF01	PPIQ.SUF01
G01	Retail Trade	PPIQ.SNG01	PPIQ.SUG01
H01	Accommodation, Cafes & Restaurants	PPIQ.SNH01	PPIQ.SUH01
I	Transport & Storage	PPIQ.SNI	PPIQ.SUI
I01	Road Transport	PPIQ.SNI01	PPIQ.SUI01
I03	Water Transport	PPIQ.SNI03	PPIQ.SUI03
I04	Air Transport	PPIQ.SNI04	PPIQ.SUI04
I02 I09	Rail, Other Transport & Storage ⁴	PPIQ.SNI09	PPIQ.SUI09

¹ Agriculture Input indexes by farm-type are based on Farm Expenses Price Index (FEPI) categories, not ANZSIC categories. Agriculture outputs indexes by farm-type are based on ANZSIC.

² Tobacco Product Manufacturing has been combined with Beverage and Malt Manufacturing for confidentiality reasons.

³ The Water Supply index is not of sufficient quality and a separate index for it is not published.

⁴ Rail Transport has been combined with Other Transport, Storage Services for confidentiality reasons

Table 2: Industry Indexes Published within the PPI (continued)		Series Identifiers	
Industry	Description	Outputs	Inputs
J01	Communication Services	PPIQ.SNJ01	PPIQ.SUJ01
K	Finance & Insurance	PPIQ.SNK	PPIQ.SUK
K01	Finance	PPIQ.SNK01	PPIQ.SUK01
K02	Insurance	PPIQ.SNK02	PPIQ.SUK02
K03	Services to Finance and Insurance	PPIQ.SNK03	PPIQ.SUK03
L	Property and Business Services	PPIQ.SNL	PPIQ.SUL
L01	Real Estate	PPIQ.SNL01	PPIQ.SUL01
L02	Ownership of Owner-Occupied Dwellings	PPIQ.SNL02	PPIQ.SUL02
L03	Other Property Services	PPIQ.SNL03	PPIQ.SUL03
L04	Business Services	PPIQ.SNL04	PPIQ.SUL04
M01	Public Administration & Defence ⁵	PPIQ.SNM01	
N01	Education ⁶	PPIQ.SNN01	
O01	Health & Community Services ⁷	PPIQ.SNO01	
P01	Cultural & Recreational Services	PPIQ.SNP01	PPIQ.SUP01
Q01	Personal & Community Services	PPIQ.SNQ01	PPIQ.SUQ01
	All Industries Excl Admin, Health, Education	PPIQ.SN8	
	All Industries ⁸	PPIQ.SN9	PPIQ.SU9
	Agriculture	PPIQ.SNX01	PPIQ.SUX01
	Food, Beverages and Tobacco	PPIQ.SNX05	PPIQ.SUX05
	Paper, Printing and Publishing	PPIQ.SNX08	PPIQ.SUX08
	Chemicals, Petroleum and Plastics	PPIQ.SNX09	PPIQ.SUX09
	Machinery and Metal Products	PPIQ.SNX12	PPIQ.SUX12

In addition to the industry indexes above, SNZ has also begun to publish selected commodity indexes, as presented in Table 3.

Table 3: Selected Commodity Indexes Published within the PPI	Series Identifiers
Livestock: Sheep & Lamb	PPIQ.SC01
Livestock: Cattle	PPIQ.SC02
Livestock: Deer	PPIQ.SC03
Wool	PPIQ.SC04
Logs For Domestic Market	PPIQ.SC05
Logs For Export Market	PPIQ.SC06
Processed Meat: Beef	PPIQ.SC07
Processed Meat: Sheep And Lamb	PPIQ.SC08
Dairy Products (Excl. Milk & Ice Cream)	PPIQ.SC09
Carpet & Textile Floor Coverings	PPIQ.SC10
Pulp	PPIQ.SC11
Paper	PPIQ.SC12
Fertiliser	PPIQ.SC13
Ready-Mixed Concrete	PPIQ.SC14
Framing Timber	PPIQ.SC15
Electricity: Commercial Consumers	PPIQ.SC16
Gas: Commercial Consumers	PPIQ.SC17
Road Freight	PPIQ.SC18
International Sea Freight	PPIQ.SC19
Finance Service Charge	PPIQ.SC20
Bank Charges	PPIQ.SC21
Commercial Rent (Excl. Agricultural Land)	PPIQ.SC22
Legal Services: Personal & Corporate	PPIQ.SC23
Accounting Services	PPIQ.SC24
Road User Charges ⁽¹⁾	PPIQ.SC25

⁵ Output indexes are not produced for this industry group, due to the non-market nature of the industry.

⁶ Output indexes are not produced for this industry group, due to the non-market nature of the industry.

⁷ Output indexes are not produced for this industry group, due to the non-market nature of the industry.

⁸ Note that the "All Industries" Outputs index excludes Public Administration & Defence, Education and Health & Community Services, since outputs indexes are not produced for these industries.

Pricing services in the PPI - The New Zealand experience

The PPI is constructed using a "building block" approach, which was introduced during the recent redevelopment. Under this structure prices feed into commodity indexes which then feed into industry indexes and finally into the All Industries index.

A total of 405 commodity, 107 working industry, 48 industry and 3 group level indexes were created during the redevelopment. In addition, a number of other indexes were also created to meet various needs. A total of some 1,500 indexes are now calculated each quarter in producing the PPI. An example of the building block structure for the Property and Business Services industry is given in Table 4.

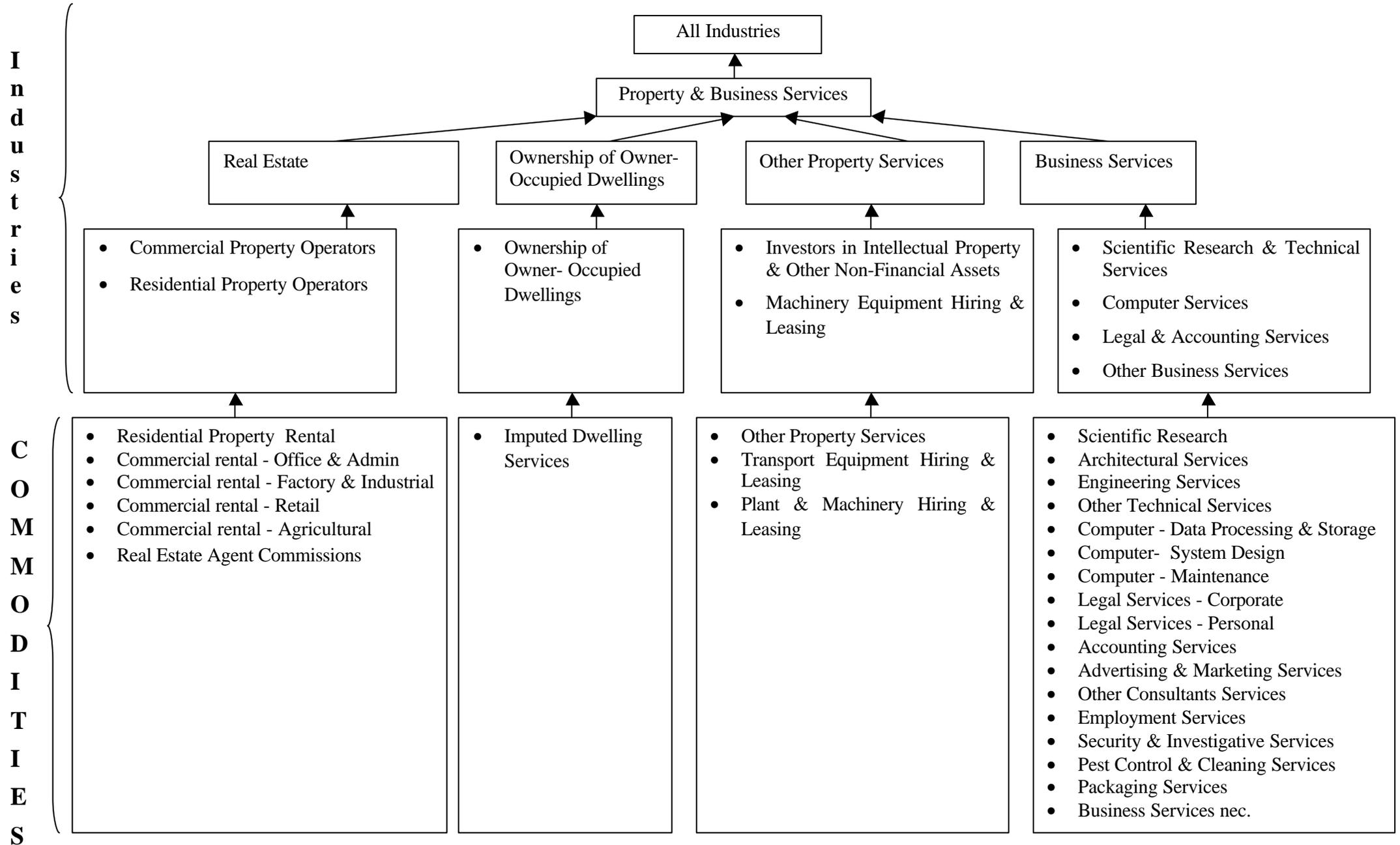
The benefits of the building block structure include:

- increased industry detail;
- improved analytical capability;
- the ability to undertake progressive reweighting.

Industry detail is increased due to greater number of industry indexes being produced and their clearly defined position in the hierarchical structure. For example, the main contributor to the business services industry can be quickly identified as one of four working industries. Then the commodity indexes, which contribute to the movement in the working industry, can be identified. The working industry and most commodity indexes are not published at present, however they are used in the analysis and commentary of the published PPI series. They are also available on request provided confidentiality and quality requirements are met.

An additional benefit of the building block structure is the depth and convenience that it allows SNZ to achieve within the PPI Inputs indexes. A single commodity sub-index (for example Corporate Legal Services) will be used as an input into virtually every industry Input index. Where changes occur within this particular service category, the change has only to be incorporated into this one index for it to implicitly flow through into every Input index in the PPI.

Table 4: Index Structure Example, PPI Outputs - Property & Business Services



SERVICES IN THE NEW ZEALAND PPI

Introduction

Most statistical organisations throughout the world have traditionally excluded services from their PPI's, due to the inherent difficulties in defining, quantifying and obtaining reliable pricing information for service activities. In recent years, a number of statistical offices have embarked on a process of including selected service activities within their PPI's. The approach which has been taken has been to concentrate on a small range of discrete service activities, and to then spend considerable effort in investigating the issues surrounding the construction of price indexes for these activities before incorporating these areas within their respective PPI's.

SNZ has taken a somewhat different approach to services within the New Zealand PPI. Since the introduction of PPI indexes for the Insurance, Finance, Property and Business Services industries in November 1980, SNZ has produced price indexes for all services industries across the range of market sectors of the New Zealand economy.

SNZ has taken a pragmatic approach to the construction of these indexes. New Zealand has a population of approximately 3.8 million people, and as such the resources available for the investigation and construction of service indexes within the PPI have been limited. The approach taken has been to start from the initial premise that the PPI is to be an economy-wide measure of the inflationary pressures faced by all market industries (including services industries). From there, price indexes have been developed using the best information possible, given existing budget constraints.

One of the major areas of difficulty in producing price indexes for service activities is that of collecting pricing information which is sufficiently quality-controlled for use within a price index. Where possible, SNZ uses a "model pricing" approach to pricing services, an attempt to provide this quality control. In many instances however, the development of such model prices has not been possible, and many service prices have in practice been represented by hourly charge-out rates that are collected from service providers.

There are a number of potential concerns arising from the use of charge-out rates as indicators of service prices. The major concerns include:

- The concern that labour productivity increases will result in the charge-out rates over-stating the true price change for the service. This is of particular concern in the business service areas, where the adoption of computing and other technology has increased labour productivity.
- While labour costs will often account for the majority of the costs in the provision of many business services, there will often be other components (materials, disbursements, overhead charges etc.) which will contribute to the final cost of the service. The effect this will have on the appropriateness of charge-out rates as indicators of effective price movement is ambiguous.
- Charge-out rates can often remain constant for long periods of time, whereas the true price of the service may well be increasing. This can result from firms "padding" invoices with greater billed hours or higher overhead charges. This would lead to the charge-out rate under-stating the true inflationary pressures in the short term, and then recording periodic dramatic increases.

Given the above concerns in relation to the use of charge-out rates to represent the price of the services provided, an investigation has been undertaken in an effort to assess the appropriateness of using such charge-out rates.

An initial investigation has looked at the pricing of legal services within the PPI, and has compared charge-out rates for barristers and solicitors with "model" prices that are collected within the PPI for a range of legal services. It is intended that the results of this initial investigation will be used to assist SNZ in determining appropriate pricing methodologies for other service industries within the PPI.

Legal Services - Model Pricing

SNZ uses a "model pricing" approach to pricing legal services within the PPI. Specifications were developed (in consultation with legal professionals) for a range of legal services provided by the legal industry. Specifications (which are included in Appendix A) have been developed for the following legal services:

- Obtaining an injunction;
- Registration of a debenture;
- Estate administration;
- Incorporation of a company;
- Traffic offence.

These specifications are sent to respondents to the Commodity Price Survey each quarter for re-pricing. Twelve separate legal firms are contacted, selected purposively from a population stratified by turnover. The respondents selected account for approximately 60 percent of the gross output of the legal services industry in New Zealand.

In addition to the model prices, the respondents to the Commodity Price Survey are also requested to provide details of charge-out rates for practitioners with particular levels of experience. These charge-out rates are used to supplement the price indexes developed for the legal services industry.

From a practical perspective, one of the difficulties associated with the model pricing approach is the relative cost of pursuing this pricing mechanism. The specifications have to be developed in conjunction with professionals in the area, and require periodic maintenance as the business environment changes. The respondent in terms of reporting time also faces additional costs. This can be compared with the relatively cost-effective approach of collecting charge-out rates, which are typically readily available from the respondent, and do not require such intensive maintenance.

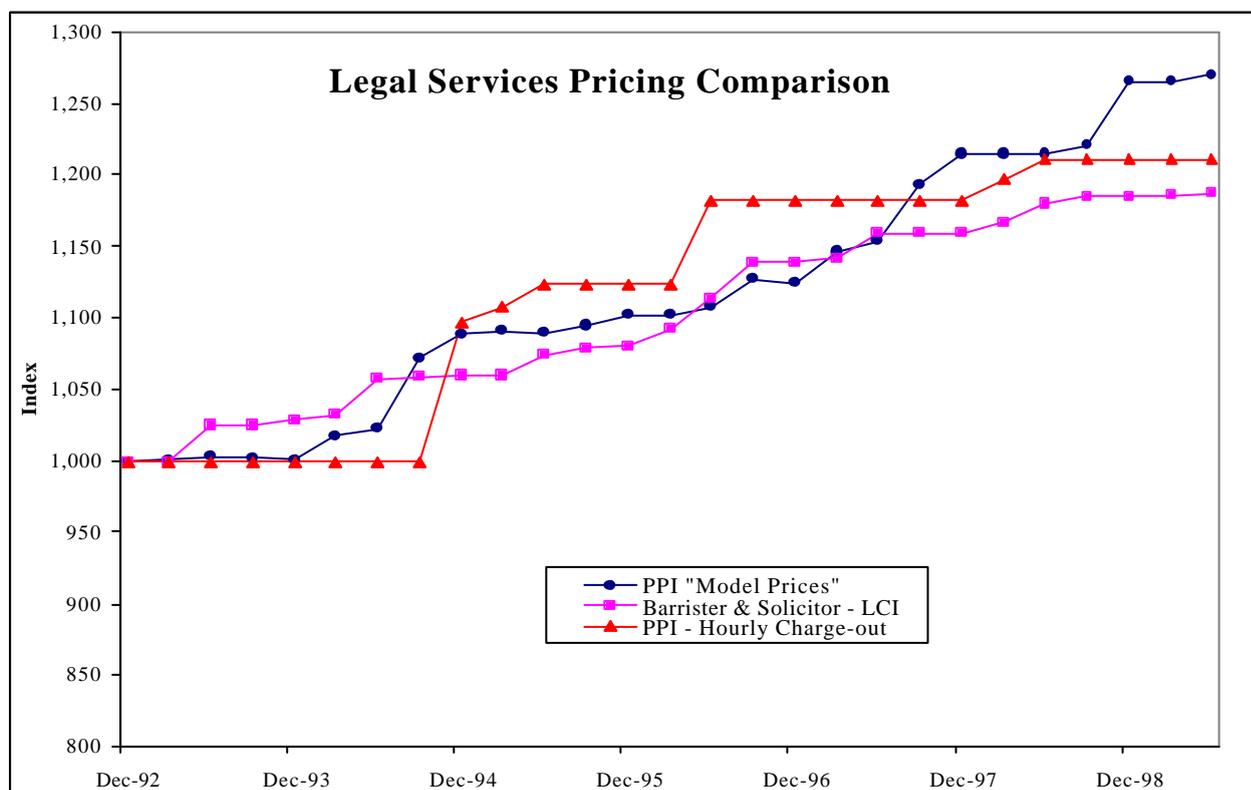
Comparison of Model Prices with Charge-out Rates

Unit-record pricing data (both model prices and charge-out rates) were extracted from the PPI items to price database, going back to December 1992. These individual prices were then aggregated to form two separate price indexes, one for the model prices and one for the charge-out rates. An additional series was also included, that being for ordinary salary and wage rates for barristers and solicitors from the Labour Cost Index (LCI).

The index numbers resulting from this comparison appear in Table 5 below.

Table 5: Legal Services Pricing Comparison					
Period	PPI		Barrister & Solicitor (LCI)		PPI - Hourly
Dec-92		1,000		1,000	1,000
Mar-93		1,001		1,000	1,000
Jun-93		1,004		1,024	1,000
Sep-93		1,002		1,024	1,000
Dec-93		1,001		1,028	1,000
Mar-94		1,017		1,032	1,000
Jun-94		1,022		1,057	1,000
Sep-94		1,072		1,058	1,000
Dec-94		1,088		1,060	1,097
Mar-95		1,090		1,060	1,108
Jun-95		1,090		1,074	1,123
Sep-95		1,095		1,078	1,123
Dec-95		1,102		1,080	1,123
Mar-96		1,102		1,092	1,123
Jun-96		1,107		1,114	1,182
Sep-96		1,126		1,139	1,182
Dec-96		1,125		1,139	1,182
Mar-97		1,146		1,141	1,182
Jun-97		1,153		1,160	1,182
Sep-97		1,193		1,160	1,182
Dec-97		1,215		1,160	1,182
Mar-98		1,214		1,167	1,196
Jun-98		1,214		1,180	1,211
Sep-98		1,220		1,184	1,211
Dec-98		1,265		1,184	1,211
Mar-99		1,265		1,186	1,211
Jun-99		1,269		1,187	1,211

The index numbers are presented in the following graph:



A number of interesting observations may be made from the resulting price series:

The importance of the definition of the service

Looking at the model price series, it is interesting to note that this series, while it has moving relatively consistently with the LCI series and the PPI Hourly series up until mid 1997, has over more recent periods been diverging upwards. This would indicate that the use of charge-out rates would have understated the inflationary pressures for these services over this period. This is the opposite of the result that would be expected considering the productivity improvements experienced in recent years due to the up-take of new technologies.

From speaking with a number of professionals in the legal area, a potential explanation for this divergence has been determined. During the early 1990's, a number of new pieces of legislation were passed in New Zealand, which have resulted in additional complexities for legal professionals in their work. Examples of such legislation include:

- Companies Act
- Employment Contracts Act
- Resource Management Act

These (and other) pieces of legislation have significantly increased the complexity of many of the services performed by the legal profession. Given that the model pricing methodology approaches the definition of the service from an output perspective, they will capture price increases resulting from these additional complexities, while the charge-out rates will not. The question which must be asked, is this a result which we want to see come through in the price index series?

Answering this question goes right to the heart of the definition of the service being provided. One school of thought holds that when attempting to define a service category to be priced, we should attempt to define the service provided from the perspective of the service that is received by the end consumer. Where, therefore, a customer is seeking the incorporation of a company, what the customer is really "purchasing" is the registration of the company, rather than all of the steps involved in the process. If legislative and administrative changes now mean that this process takes the legal professional twice as long (and hence the price doubles) this would be viewed by the purchaser as a price increase. A qualification to this would be where the consumer demonstrably receives an additional benefit, the quality of the service will have increased, and the price should be adjusted accordingly. The "model pricing" approach is in effect capturing price change for the service defined in this "utilitarian" manner.

Another school of thought would argue that the service should be defined in terms of the individual tasks that constitute it. Any changes in the steps necessary to provide the service should be therefore viewed as quality changes, and the price adjusted accordingly. Where labour costs form a substantial proportion of the overall cost of the service being provided, the hourly charge-out rate would conceptually approximate the price of this service (taking into account labour productivity improvements). This would effectively involve "unbundling" the service and pricing its component parts.

Which of these two approaches is preferable is open to debate. It may well be that the answer lies in the purpose for which the index is to be used. If it to be used as an indicator of the price faced by firms consuming legal services (i.e. as part of their intermediate consumption), then the "utilitarian" approach should be adopted. If, however, it is to be used as an indicator of the output price, and is to be used to deflate current dollar sales to arrive at a constant price measure of the output of the legal services industry, then arguably the "unbundled" approach should be adopted.

Other observations

A number of other observations may be made from an analysis of the above graph.

1. Of particular note is the observed tendency of the hourly charge-out rate to move in a "step-wise" manner. This is consistent with expectations regarding the movements of this indicator.
2. While there are a number of differences in the series examined in the short term, over longer time periods, it would appear that the series are relatively highly correlated. (see Table 6 below for correlation coefficients). While correlation coefficients are only of limited use in analysing time series such as this, they are illustrative. Additional work is necessary to determine what the practical effect would be on the PPI series of substituting either the LCI or hourly charge-out rates for the existing "model prices".

	<i>PPI Model Prices</i>	<i>Barrister & Solicitor - LCI</i>	<i>PPI - Hourly Charge-out</i>
<i>PPI Model Prices</i>	1.000		
<i>Barrister & Solicitor - LCI</i>	0.961	1.000	
<i>PPI - Hourly Charge-out</i>	0.915	0.942	1.000

Conclusion

The preceding investigation represents an initial investigation into the validity of using charge-out rates to represent services activities. It has focused on a specific category of business service, and as such comparisons with other services can not be readily made. There have been a number of developments (legislative changes etc.) that have impacted on the legal industry over the last decade that may not have impacted to the same extent on other service industries.

Notwithstanding the limited scope of the investigation, a number of interesting points can be made:

- The definition of the service being provided is of paramount importance in constructing price indexes for service activities. This definition may well depend upon the uses to which the price index will be put, and this will in turn impact upon the choice of an appropriate pricing methodology.
- While there are clearly some short-term differences in the index series derived from using model prices as opposed to charge-out rates for legal services, over the medium to long-term these differences are not necessarily as large as might have been expected.
- Where the additional costs involved in developing and maintaining a model pricing methodology for service activities are significant, it may be that the use of charge-out rates can provide an cost-effective substitute while still returning a meaningful time series.

APPENDIX A: LEGAL PRICE SPECIFICATIONS

STANDARD SPECIFICATION FOR OBTAINING AN INJUNCTION

1. You are contacted by the managing director of a client company. He advises that the company has been served with a Section 218 notice and requests an urgent appointment to see you.
2. Preliminary interview with managing director in which he:
 - a) Gives you a brief outline of the circumstances giving rise to the issue of the notice;
 - b) Hands you relevant documents; and
 - c) Inquires what steps should be taken.
3. You first check the section 218 notice to see when the time expires after which the creditor can issue a statement of claim.
4. Having ascertained what date, you then advise the managing director that, having regard to the short time available, you will study the documents and let him have your advice very shortly.
5. Over the ensuing 48 hours you spend time studying the documents and then write to the solicitors who issued the section 218 notice. The purpose of this letter is:
 - a) To point out that the debt is disputed and that therefore a section 218 notice is inappropriate;
 - b) To advise them that, in any event, your client has a claim which exceeds the amount of the disputed debt;
 - c) To ask them whether, in view of the above, they still intend proceeding; and
 - d) To advise them that unless you hear from them within seven days that they do not intend proceeding, you will apply to the Court for an injunction.
6. Within seven days a reply is received advising that they do not consider your client's position to be financially strong; that they do not consider that the debt is genuinely disputed and that they do intend proceeding if the money is not paid or security given.
7. Following this there is a lengthy consultation with the managing director for the purpose of preparing the documentation necessary to obtain an injunction. As it is necessary to persuade the Court that the dispute over the debt is a matter of substance and not simply a smoke-screen designed to put off the evil day; full details of the dispute must be given.
8. The following documents are then prepared for filing in the Court:
 - a) Statement of claim and notice to defendant asking for:
 - i) A declaration that the alleged debt is not owing;
 - ii) Damages for breach of contract; and
 - iii) Costs.
 - b) An ex parte application for injunction restraining the defendant company from issuing and/or advertising a winding up petition on the grounds that:
 - i) The debt is disputed;
 - ii) There is a claim which exceeds the amount of the disputed debt.
 - iii) The presentation and advertising of the petition will do irreparable harm to the plaintiff company.
 - c) An affidavit from the managing director of the plaintiff company setting out full details of the disputed debt and the background to it.
9. These documents are then filed in the Court. The motion is ex parte because of the urgency of the situation and the fact that when the proceedings are filed the time for the expiry of the notice has almost arrived. If there were ample time then the motion would inevitably have to be served on the other party.
10. In the first instance the papers are placed before the Judge and he makes an order after perusal of the papers. He does not call counsel to see him for further clarification of the issues.
11. You arrange to have the order sealed in the Court and served on the defendant company forthwith to prevent the statement of claim for winding up proceeding.

STANDARD SPECIFICATION FOR REGISTRATION OF DEBENTURE

Assume: Your client company is asked to give a debenture to its trading bank to see fluctuating overdraft and other banking accommodation up to \$25,000. The bank's debenture is to take priority over an existing debenture to a finance company securing \$10,000 fixed item of plant.

1. Receive letter of instruction from lending institution. Check:
 - (a) level of accommodation;
 - (b) interest and finance rate (servicing ability).
2. Search company including Memorandum and Articles. Check that company has power to give such a security. Obtain full details of prior charge.
3. Confirm lending institution's instructions and conditions with client.
4. Peruse trading bank's debenture (standard form).
5. Complete details in debenture.
6. Prepare Declaration of Due Execution and company resolutions including Disclosures of Interest. Ensure that the same conform with the company's Articles of Association.
7. Prepare Deed of Modification of Priority and obtain confirmation from on debenture holders to the terms thereof.
8. Attendances on execution of the following documents:
 - (a) Resolutions incorporating appropriate Disclosures of Interest;
 - (b) Debenture;
 - (c) Declaration of Due Execution;
 - (d) Deed of Modification of Priority.
9. Attendance's on Disclosure.
10. Arrange noting of appropriate insurance policy.
11. Forward priority document to other debenture holder for execution and return.
12. Register Companies Office copy of debenture.
13. Forward certificates to lending institutions to confirm compliance with requirement and request drawdown of funds.
14. Report to client.
15. Uplift funds and disburse.
16. Attend to stamping of Deed of Priority
17. Forward final solicitor's certificate to lending institutions together with debentures security documents including Section 105 certificate, Deed of Priority and insurance policy.
18. Final report to client.

STANDARD SPECIFICATION FOR ESTATE ADMINISTRATION

Work involved in approximate chronological order

1. Preliminary interview with executor, discussion of terms of the will, the nature and approximate length of time of the administration of the estate and likely cost.
2. Written report to executor, supplying copy of will and summary of administration.
3. Drafting Affidavit to Lead Grant of Probate, Affidavit of Death where necessary. Notice of Application to the Court for Grant of Probate. .
4. Attendance on executor and having Affidavits sworn.
5. Filing Application and Affidavit(s) at High Court Registry.
6. Preparing and sending letters to Postbank, Life Insurance Company and Trading Bank seeking particulars of derived and accrued interest for tax purposes and amount payable to estate.
7. Receiving responses from them.
8. Searching certificate of title to house property.
9. Obtaining death certificates (2) (and birth certificate if age not admitted by the insurance company).
10. Receiving minute of Court's Order on application for Probate, preparing formal Grant of Probate and Declaration in value of estate.
11. Sealing Grant of Probate and filing Declaration at High Court Register
12. Preparing Transmissions by Survivorship of jointly owned house property.
13. Preparing taxation returns to date of death.
14. Reporting to executor, supplying Schedule of Assets and Liabilities.
15. Attending on widow/er for execution of Transmission.
16. Advising rates authority, Valuation Department, insurance company, electrical supply authority and Telecom re telephone, of transfer of joint house property to widow/er.
17. Attending at Land Transfer Office with Transmission (death certificate annexed) and certificate of title for registration.
18. Receiving release of Probate from High Court.
19. Completing life insurance discharge, specimen signature and withdrawal forms for Postbank and trading back accounts.
20. Arranging execution of discharge and withdrawal forms by the executor.
21. Forwarding life insurance policy, death certificate (and birth certificate) discharge and probate to life insurance company requesting payment.
22. Receiving return of Probate from life insurance company together with cheque in settlement. Arranging for payment into trust account.
23. Forwarding specimen signature and withdrawal forms and Probate to trading bank and arranging for closing of account, final bank statements and payment.
24. Receiving return of probate from trading bank and cheque in settlement. Arranging for payment of cheque into trust account.
25. Forwarding specimen signature and withdrawal forms and Probate to Postbank and requesting payment to the estate.
26. Receiving return of Probate from Postbank together with cheque in settlement. Arranging for payment into trust account.
27. Payment of debts including funeral expenses.
28. Reporting to executor and beneficiary and arranging payment of interim distribution to beneficiary if required.
29. Receiving, checking and paying assessment from Inland Revenue Department in respect of taxation return to the date of death.
30. Preparing final estate accounts.
31. Preparing a trustee's tax returns from date of death to date of distribution.
32. Final report to executor and beneficiary supplying final statements.
33. Attendance on executor to discuss final accounts and make payment of the balance held in trust.
34. Sundry telephone attendances (say 5) during administration.

STANDARD SPECIFICATION FOR INCORPORATION

Assume: You are consulted by a husband and wife who have purchased a suburban bookstore. They wish to operate the business as a limited liability company with a nominal capital of \$10,000. The husband and wife wish to be the shareholders and directors and they wish their accountant to be the secretary.

1. Preliminary discussion canvassing:
 - 1.1 Reason for incorporation
 - 1.2. Concept of limited liability
 - 1.3. Level of paid up capital and reasons why.
 - 1.4. Selection of proposed name.
 - 1.5. Shareholders, Directors and Secretary
 - 1.6. Type of business.
 - 1.7. Registered office.
 - 1.8. Bankers.
2. Name approval. Forward application for name approval to Registrar of Companies, Wellington, including disbursement.
3. Receive name approval.
4. Draft company documents including:
 - 4.1 Articles of Association.
 - 4.2 Memorandum of Association.
 - 4.3 Notice of Situation of Registered office.
 - 4.4 Particulars of Directors and Secretary.
 - 4.5 Consent to Act as Director.
 - 4.6 Consents to Act as Secretary.
 - 4.7 Minutes of first meeting of Directors.
5. Order Common Seal.
6. Collect funds from clients to cover disbursements including approval fee, registration costs and Common Seal.
7. Attendances pertaining to explanation of Articles, Memorandum, powers and rights pursuant thereto, obligations of officers, accounting method, opening of banking accounts and payment of capital.
8. Attendances on execution of documents
9. Submit documents to Companies Office for registration.
10. Receive advice as to incorporation.
11. Report and account to clients and advise of incorporation, forward incorporation documents including
 - 11.1 Certificate of Incorporation.
 - 11.2 Articles of Association.
 - 11.3 Memorandum of Association.
 - 11.4 Minutes of first meeting of Directors
12. Forward minutes of first meeting to Directors.
12. Forward copies of Articles of and Memorandum of Association to nominated

STANDARD SPECIFICATION FOR A TRAFFIC OFFENCE

1. Preliminary interview - charge of dangerous driving against stock agent involving a non-injury collection. Instructed to defend the charge.
2. Attending at Court when information adjourned for a defended hearing.
3. Interviewing defence witness (passer-by) and defendant to prepare a hearing.
4. Speaking to Ministry of Transport to obtain details of prosecution evidence. If necessary, making a request under the Official Information Act 1983.
5. Attending at Court to conduct defended hearing in which traffic officer in charge of prosecution and other driver give evidence for prosecution as well as defendant and passer-by for defendant. Total time involved at Court 1½ hours.
6. Preparing application for limited licence involving affidavits from defendant and employer representative.
7. Attending at Court to obtain limited licence against opposition from Ministry of Transport.